

BEFORE THE
STATE OF ILLINOIS
COMMERCE COMMISSION

Illinois-American Water Company,
Proposed general increase in water rates.

Docket No. 02-0690

Direct Testimony of
Scott J. Rubin

on Behalf of
the People of the State of Illinois
by the Office of the Attorney General, Lisa Madigan

February 5, 2003

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I. Introduction

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Scott J. Rubin. My business address is 3 Lost Creek Drive, Selinsgrove, PA.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am an independent consultant and an attorney. My practice is limited to matters affecting the public utility industry.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS CASE?

A. I have been asked by the Office of the Attorney General to review the rate structure and rate design proposed by Illinois-American Water Company (IAWC or Company) in this case, and to make recommendations concerning the way in which rates should be designed to recover any rate increase granted to the Company.

Q. WHAT ARE YOUR QUALIFICATIONS TO PROVIDE THIS TESTIMONY IN THIS CASE?

A. I have testified as an expert witness before utility commissions or courts in the District of Columbia and in the states of Arizona, Delaware, Kentucky, Maine, New Jersey, New York, Ohio, Pennsylvania, and West Virginia. I also have testified as an expert witness before the U.S. House of Representatives Science Committee and the Pennsylvania House of Representatives Consumer Affairs Committee. I also have served as a consultant to several national utility trade associations and to state and local governments throughout the country. Prior to establishing my own consulting and law practice, I was employed by the Pennsylvania Office of Consumer Advocate (OCA) from 1983 through January 1994 in increasingly responsible positions. From 1990 until I left the OCA, I was one of two senior attorneys in that Office. Among my other responsibilities in that

1 position, I had a major role in setting the OCA's policy positions on water and electric
2 matters. In addition, I was responsible for supervising the technical staff of that Office. I
3 also testified as an expert witness for that Office on water rate design and cost of service
4 issues.

5 Throughout my career, I developed substantial expertise in matters relating to the
6 economic regulation of public utilities. I have published articles, contributed to books,
7 written speeches, and delivered numerous presentations, on both the national and state
8 level, relating to regulatory issues. I have attended numerous continuing education
9 courses involving the utility industry. I also periodically participate as a faculty member
10 in utility-related educational programs for the Institute for Public Utilities at Michigan
11 State University, the American Water Works Association, and the Pennsylvania Bar
12 Institute. Appendix A to this testimony is my curriculum vitae.

13 Q. DOES ANY OF YOUR EXPERIENCE SPECIFICALLY INVOLVE RATE DESIGN AND/OR COST OF
14 SERVICE ANALYSES FOR WATER UTILITIES?

15 A. Yes, it does. I have testified as an expert witness on rate design and/or cost of service
16 analyses in cases involving relatively large water utilities on behalf of public advocates in
17 Arizona, Kentucky, and Pennsylvania. I also testified on rate design and cost of service
18 issues on behalf of a group of very large industrial customers in a case in Pennsylvania.
19 In addition, I have testified on rate design and cost allocation issues for small utilities,
20 and for energy utilities, in Maine and New Jersey. I also have been retained as a
21 consultant for several municipal water utilities (either directly or through another
22 consultant) to assist them in designing water rates.

23 In addition, from 1988 through 2001, I served as a member of the Rates and

Charges Subcommittee of the American Water Works Association (AWWA). During my tenure on that committee, we were responsible for preparing the current version (the Fifth Edition, published in 2000) of AWWA's Manual M1: *Principles of Water Rates, Fees, and Charges*. Manual M1 is generally considered to be the major reference work within the water industry for the establishment of rates, including revenue requirements, rate design, and cost of service. I served on the Editorial Committee that prepared the Manual. My responsibilities included being primarily responsible for the production of six chapters, assisting in the production of two additional chapters, reviewing the entire book prior to publication, and helping to present a seminar for the industry on the new Manual at AWWA's annual conference.

II. Summary of Testimony

Q. WHAT IS THE MAIN FOCUS OF YOUR TESTIMONY?

A. My testimony focuses on the design of IAWC's rates and, in particular, on rates for residential, commercial, industrial, Other Public Authority (OPA), and Other Water Utility (OWU) customers. The Commission should require IAWC to adopt the system-average percentage increase in its other charges (for example, fire protection, competitive rates, and other special rates) to achieve the overall revenue requirement. I have not attempted to prepare a cost of service study for IAWC, though I expect to review the study that will be prepared by the Commission Staff.

Q. DOES YOUR FOCUS ON RATE DESIGN IN THIS CASE HAVE ANY PARTICULAR GOALS?

A. Yes. IAWC has one of the most complicated tariffs and rate designs that I have ever seen for a water utility. In addition, IAWC's rates contain several different rate structures (or

1 blockings), vastly different rates for the same class and character of service, and a general
2 lack of a relationship between cost and the specific rates themselves. All of this is not
3 necessarily IAWC's fault; IAWC has grown by acquiring several other water utilities and
4 many of these rate differences are artifacts of that acquisition process.

5 Thus, my major goals are to (1) simplify the rate design and tariffs of IAWC;
6 (2) begin the process of moving all IAWC customers onto the same set of rates; and
7 (3) ensure that those rates bear a reasonable relationship to the costs incurred by IAWC to
8 serve its customers.

9 Q. BEFORE YOU GO INTO DETAIL ON YOUR RATE DESIGN PROPOSALS, PLEASE SUMMARIZE
10 YOUR MAJOR FINDINGS AND CONCLUSIONS.

11 A. My major findings can be summarized as follows:

- 12 • IAWC's existing and proposed rates are unnecessarily complex and
13 confusing and lead to similarly situated customers paying vastly different
14 rates for water service. For example, a residential customer with a 5/8-
15 inch meter who uses 7 hundred cubic feet (ccf) of water in a month will
16 pay a base rate of anywhere from \$18.55 to \$26.83 per month under
17 IAWC's existing rates.
- 18 • The specific elements of IAWC's existing and proposed rates do not bear
19 a reasonable relationship to the cost of service. In fact, it appears that
20 many of those rates were set without considering the specific elements of
21 cost developed in the cost of service study. For example, some charges
22 for water are actually lower than the base cost of water, while many other
23 water charges fall far short of recovering the full cost of providing service.
- 24 • IAWC's existing rates reflect several different meter ratios (that is, the
25 ratio of the customer charge to the flow rate of each different sized meter).
26 The ratios among meter charges should be standardized for all IAWC
27 customers.
- 28 • Now is an appropriate time to begin moving IAWC's rates toward single
29 tariff pricing, so that all similarly situated customers eventually will pay
30 the same rate for water service.
31

1 Q. HAVE YOU BEEN ABLE TO DESIGN RATES TO MEET YOUR GOALS AND TO ALLEVIATE THE
2 PROBLEMS WITH IAWC'S EXISTING AND PROPOSED RATES?

3 A. Yes, I have been able to design rates that meet most of these goals and that begin to
4 eliminate the major problems with IAWC's proposal. In the interest of gradualism and
5 overall fairness, however, I have not been able to completely eliminate discrepancies
6 among the various divisions of IAWC. My proposed rate design, though, does make
7 substantial progress toward moving all IAWC customers onto a more uniform, fair, cost-
8 based, and understandable set of rates. Specifically, my proposed rate design
9 accomplishes the following:

- 10 • Standardizes the meter ratios across all IAWC divisions;
- 11 • Moves toward a single set of meter (or customer) charges for all divisions;
- 12 • Establishes a uniform set of rate blocks for all IAWC divisions;
- 13 • Moves toward a single set of block ratios (that is, the percentage discount
14 from one consumption block to the next) for all IAWC divisions; and
- 15 • Begins the process of moving toward a single set of consumption charges
16 for all divisions.

17 **III. Rate Design Principles**

18 Q. WHAT PRINCIPLES GOVERN YOUR DESIGN OF RATES FOR IAWC?

19 A. There are three basic principles that govern my design of rates in this case: (1) the need
20 to simplify and unify the rates by moving toward single tariff pricing; (2) the need to
21 moderate the rate increases received by customers, which includes the concepts of
22 gradualism, fairness, and rate continuity; and (3) the need to move specific rate elements
23 closer to cost.

1 Q. PLEASE BEGIN BY DISCUSSING YOUR FIRST PRINCIPLE. WHAT IS SINGLE TARIFF PRICING
2 AND WHY IS IT IMPORTANT TO MOVE TOWARD SINGLE TARIFF PRICING FOR IAWC?

3 A. Single tariff pricing (STP) is a concept that we have accepted for decades in other utility
4 industries, and is slowly becoming the norm in the water industry as well. STP involves
5 serving all customers of a utility, regardless of location, under a single rate schedule.
6 Under STP, we may continue to recognize distinctions among classes of customers
7 (residential, commercial, and so on), but we no longer make distinctions by the physical
8 location of the customer.

9 For any type of utility service, we know that some customers live closer to
10 transmission lines, city gates, central offices, or other centralized facilities than do other
11 customers; some customers provide easier access to meters than do other customers;
12 some customers are served with above-ground lines while other customers have
13 underground lines; and so on. Each of these differences results in very real differences in
14 the cost of serving a particular customer, but we do not reflect those individual
15 differences in rates. Instead, we average costs over a large group of customers. This
16 promotes the simplicity and overall fairness of the rates, and also eliminates the need to
17 perform extremely precise cost-of-service analyses. It also recognizes that many
18 elements of a utility's cost are incurred centrally, making a very specific cost-of-service
19 analysis largely an exercise in allocating those centrally incurred costs based on certain
20 averages or characteristics.

21 Q. DID OTHER UTILITIES ONCE HAVE ZONAL OR DISTANCE-BASED RATES?

22 A. Yes, many years ago, it was not uncommon for electric, gas, and telephone utilities to
23 have rates that varied by the customer's location. Mileage charges for local telephone

1 service (higher rates for customers who lived further from the central office) and electric
2 and gas rates that varied by the zone in which the customer lived were not uncommon.
3 This was particularly the case as large utilities grew by acquiring smaller utilities – rate
4 differences were retained during the transition from separate utilities into a larger,
5 centrally operated utility. As utilities became more integrated, and as more costs were
6 incurred centrally, these rate differentials were eliminated and utilities established a
7 single tariff for each class of customers.

8 Q. IS THE WATER INDUSTRY GOING THROUGH THIS SAME PROCESS?

9 A. Yes, it is. The water industry is going through the same process of consolidation and
10 growth through acquisition. As larger utility companies are formed, and more costs are
11 incurred centrally, many commissions are adopting single tariffs. In fact, within the
12 American Water Works Company, STP has been used successfully in Pennsylvania
13 (where more than 200 once-separate water systems have been acquired by Pennsylvania-
14 American Water Company and are now served under a single tariff), West Virginia, and
15 others. A 1999 survey of state utility commissions showed that 17 had adopted single-
16 tariff pricing for at least some water utilities. U.S. Environmental Protection Agency,
17 *Consolidated Water Rates: Issues and Practices in Single-Tariff Pricing*, EPA 816-R-99-
18 009 (Sept. 1999).

19 Q. TO THE BEST OF YOUR KNOWLEDGE, HAS THE ILLINOIS COMMERCE COMMISSION
20 APPROVED STP FOR IAWC IN THE PAST?

21 A. Yes, it has. The Commission previously approved STP for the Alton, Cairo, and
22 Interurban districts. Those districts are collectively referred to as the Southern Division

1 in IAWC's filing. It also has approved the movement toward STP of other districts onto
2 the same rate as the Southern Division.

3 Q. OTHER THAN SIMPLICITY AND FAIRNESS, DOES STP HAVE OTHER BENEFITS?

4 A. Yes, it does. STP can serve as a catalyst for a large utility to acquire smaller utilities that
5 may be experiencing service problems or high costs (due to the absence of economies of
6 scale in small water utilities). Having a single tariff can provide certainty both for the
7 utility and for the customers of the acquired system, concerning the rates that will be
8 charged.

9 In addition, STP enables the utility to spread the costs of major system
10 improvements among a much larger group of customers. If the utility is divided into
11 relatively small rate districts, a major expenditure in a district (such as new treatment,
12 main replacements, new wells, new storage, etc.) can result in dramatic rate increases to a
13 relatively small group of customers. STP allows those types of costs to be spread over a
14 much larger customer base, moderating the rate increases that are necessary to pay for
15 important system improvements. Over time, just as occurs in other utility industries, it is
16 expected that each customer will benefit as some facility serving that customer requires a
17 major upgrade or expansion.

18 Q. YOUR SECOND PRINCIPLE IS THE NEED TO MODERATE THE LEVEL OF RATE INCREASES
19 AMONG DIFFERENT GROUPS OF CUSTOMERS. PLEASE EXPLAIN THIS FURTHER.

20 A. My second principle encompasses traditional ratemaking concepts such as gradualism,
21 fairness, rate moderation, and rate continuity. In essence, the principle says that you
22 should try to be fair to everyone. You should try to avoid giving some customers huge
23 rate increases while others receive relatively small increases or even rate reductions.

1 Q. HOW DO YOU OPERATIONALIZE THIS PRINCIPLE IN THIS CASE?

2 A. In this case, given the diversity of rates and the need to simplify the rates, I have set a
3 goal that no customer class should receive a rate increase that differs by more than 50%
4 from the system average percentage increase. For example, if the system average
5 increase is 10%, then all customer classes should receive increases in the range of 5% to
6 15%.

7 I also have the goal of trying to ensure that all customers' bills will receive
8 increases in this range (+/- 50% of the system average increase), but that goal will be
9 much harder to meet because of changes in customer charges that I will recommend. In
10 particular, it may not be possible to meet this goal for some low-use bills if customer
11 charges are increased significantly for some customer groups. For residential customers,
12 it is unlikely that a customer would have a very low use bill every month; that is,
13 residential bills reflecting very low consumption are likely to represent months when a
14 customer was away from home for a couple of weeks or where the residence is just used
15 seasonally. For customers with larger meters, low-usage months could reflect seasonal
16 businesses or could represent customers whose meters are too large for their needs.
17 While I will try to avoid these types of impacts, I recognize that they may occur. In
18 addition, I believe that such customers are likely to experience off-setting benefits in
19 months when their usage is higher.

20 Q. YOUR THIRD PRINCIPLE IS TO MOVE RATES CLOSER TO COST. WHY IS THAT A CONCERN FOR
21 IAWC CUSTOMERS?

22 A. IAWC's consumption rates appear to have been set for a number of years without regard
23 to the specific elements of the cost of service. IAWC's rates use a declining block rate

1 structure. The only legitimate way to justify a declining block rate is if the rate charged
2 in each rate block bears a relationship to the cost of providing service to the customers
3 who are likely to take service in that block. Specifically, the declining block rate should
4 reflect the characteristics of the predominant group of customers who will consume water
5 in that block.

6 Q. CAN YOU USE THE SOUTHERN DIVISION'S EXISTING RATES AS AN EXAMPLE?

7 A. Yes, I can. The existing rates in Southern Division consist of four rate blocks: the first 30
8 ccf per month, the next 570 ccf, the next 12,400 ccf, and all usage over 13,000 ccf per
9 month.

10 The first block, 30 ccf per month, is predominantly used by residential customers.
11 Approximately 97% of residential consumption is in this first rate block. In contrast,
12 only about 35% of commercial consumption is in this block, while 2% or less of
13 consumption is in this block for the industrial and OWU classes.

14 The second block, the next 570 ccf per month, is predominantly for commercial
15 and OPA customers. Approximately 45% of commercial and OPA consumption is in this
16 rate block, while only 3% of residential consumption, 2% of OWU consumption, and
17 12% of industrial consumption is in this block.

18 The third block, the next 12,400 ccf per month, is predominantly used by
19 industrial (52% of consumption), OPA (44% of consumption), and OWU (32% of
20 consumption) customers. The final block is used exclusively by industrial and OWU
21 customers, with approximately two-thirds of OWU consumption in this block.

22 A cost-of-service study provides us with information about the water consumption

characteristics of each customer class, and that information is supposed to be used to develop the rates for, and the relationship among, the rate blocks.

Q. WHAT INFORMATION DOES THE COST-OF-SERVICE STUDY GIVE US ABOUT THE CONSUMPTION CHARACTERISTICS OF EACH CUSTOMER CLASS?

A. The cost-of-service studies that have been performed for IAWC use the base-extra capacity method. This is a well-recognized method of performing a cost-of-service study for a water utility and it is one of the methods that is specifically described in AWWA's Manual M1.

For the purpose of consumption charges, the base-extra capacity method divides the consumption costs of a water utility into three components (other components, not related to consumption charges, include customer costs and fire costs): base, maximum day, and peak hour. Base costs are costs that are incurred for each gallon of water that is produced. Examples of base costs include chemicals for water treatment and electricity for pumping water. Maximum day costs are associated with meeting the utility's highest daily demand during the year. For most utilities, including IAWC, this would be a hot, dry summer day. Maximum day investments include the capacity of the treatment plant, transmission mains leading from the treatment plant, and so on. Peak hour costs are related to the highest hourly demand on the system. The peak hour usually is a function of weather (the hot, dry summer day) as well as daily consumption patterns and the possibility of a fire occurring at the same time. Investments needed to serve the peak hour include storage tanks and some component of nearly all mains and valves to ensure that sufficient water can be delivered at adequate pressure during peak periods.

The base-extra capacity method divides costs into these three categories and also

1 associates a quantity of water with each category of costs. For example, the result may
2 be that there are base costs of \$1 million and a base demand (consumption) of 1 million
3 gallons per day (MGD). This would result in a base cost of water of \$2.74 per 1000
4 gallons (\$1 million divided by 365 million gallons, times 1,000). Similar calculations are
5 performed for the maximum day and peak hour costs. When these figures are combined
6 with each customer class's demand characteristics, the cost for each consumption block
7 can be developed.

8 Q. HOW SHOULD YOU USE EACH CLASS'S DEMAND CHARACTERISTICS TO DEVELOP THE RATES
9 FOR THE CONSUMPTION BLOCKS?

10 A. The method for doing this is described in the M1 Manual, complete with an example. I
11 have attached a copy of the relevant pages as Schedule SJR-1. The methodology starts
12 with each consumption block needing to recover the base cost of water. This is
13 intuitively obvious and, in fact, except in very rare circumstances, a water utility should
14 never be allowed to sell water for less than its base cost of water. Then, the demand
15 characteristics of the predominant class taking service in each rate block are used to
16 determine the share of maximum day and peak hour costs assigned to each consumption
17 block. For example, as discussed earlier, the residential class is the predominant class
18 taking service in the first rate block, so that class's demand characteristics (maximum day
19 and peak hour ratios) are used to assign maximum day and peak hour costs to the first
20 block. For IAWC, the second block's characteristics should be based on an average of
21 the commercial and OPA classes' demands; the third block should use the higher of the
22 industrial and OWU demand factors; and the fourth block should use the lower of the
23 industrial and OWU demand factors.

1 Q. HAVE YOU PERFORMED THIS CALCULATION FOR THE SOUTHERN DIVISION?

2 A. Yes, I have. Schedule SJR-2 shows this calculation for the Southern Division. The
3 schedule uses information from the Company's last rate case as found in Staff's final
4 cost-of-service study in that case. This schedule applies the methodology that I described
5 above, and that is contained in AWWA's Manual M1, to develop the estimated cost-
6 based rate. As can be seen from the schedule, IAWC's existing rates deviate
7 substantially from the cost-based rate. For example, the rate in block 1 is approximately
8 24% higher than the cost-based rate, while the rates for large-volume users (blocks 3 and
9 4) are about 20% below cost.

10 Even more troubling, though not shown on this schedule, is that IAWC's existing
11 rate in the Southern Division for Large Users is only \$0.9850 per ccf, which is less than
12 the base cost of water of \$1.0358 per ccf. That is, not only is this class not covering any
13 demand-related costs, it is not even covering the average cost of producing and
14 distributing water during non-peak periods. The same is true to an even greater extent for
15 the Competitive and OWU Competitive rates, which are more than 25% below the base
16 cost of water at \$0.7707 and \$0.7376, respectively.

17 Q. HOW WILL YOU USE THIS INFORMATION TO OPERATIONALIZE YOUR THIRD PRINCIPLE:
18 TRYING TO MOVE RATE ELEMENTS CLOSER TO COST?

19 A. By performing a similar type of analysis for several of IAWC's districts, I have
20 developed a standard set of ratios, or relationships, among the rate blocks. Using these
21 ratios leads to the development of consumption blocks that provide price discounts that
22 are directly related to the cost of serving customers with different characteristics. This, of
23 course, is the only legitimate reason for having a declining block rate in the first instance.

1 I show the development of the specific ratios on Schedule SJR-3. This schedule
2 uses information from the most recent Commission Staff cost-of-service studies with
3 which I was provided. It then uses that information to calculate the cost-based rate in
4 each consumption block and to develop a standard set of ratios among the blocks. The
5 result, as shown at the bottom of the schedule, is that the rate in block 2 should be 85% of
6 the block 1 rate; the rate in block 3 should be 80% of the block 1 rate; and the rate in
7 block 4 should be 75% of the block 1 rate.

8 Q. SOME OF THESE DISCOUNTS SEEM RELATIVELY SMALL. WHY IS THAT THE CASE?

9 A. Some of the discounts are relatively small, and that is because there is not much
10 difference in the demand characteristics of some of the customer classes. Given weather
11 and consumption patterns in Illinois, there is not a dramatic difference in the demand
12 characteristics of the customer classes. In more arid climates, it would not be unusual to
13 see residential peak hour factors of 5 or even 7 times average daily demand. For IAWC,
14 however, those factors are more in the range of 3 times average demand. Commercial,
15 industrial, and other large users have peak hour factors in the range of 2 times average
16 demand, which is not a very large difference. Similarly, the maximum day demand
17 factors are about 2.2 times average demand for residential customers, while they are
18 generally between 1.6 and 1.8 times average demand for larger customers. Again, this is
19 not the type of difference that would result in steep rate discounts for larger water users.

20 In addition, IAWC's portion of maximum day and peak hour costs, as compared
21 to base costs, is not large enough to result in steep discounts. Maximum day and peak
22 hour costs, for the districts shown on Schedule SJR-3, total about \$26 million, compared
23 to base costs of \$46 million. Thus, with base costs accounting for about two-thirds of the

costs to be recovered through consumption charges, and there being a relatively small difference among the class demand factors, I would not expect there to be a large differential among the rate blocks.

Q. HOW DOES THIS INFORMATION AFFECT YOUR THIRD PRINCIPLE – THE NEED TO MOVE RATES CLOSER TO COST?

A. Most of IAWC's existing rate schedules contain much steeper discounts for higher-use consumption blocks than are justified from differentials in the cost of service. The most extreme examples are rates that are actually below the base cost of water: Southern Division rates for Large Industrial, Competitive, and OWU Competitive; Champaign rate for block 5 (University of Illinois), and Streator rate for block 3. Many other rates, however, fail to recover an appropriate portion of demand-related costs from higher-use customers. Therefore, I will attempt to use the standard ratios among the rate blocks that I developed on Schedule SJR-3 to move the consumption blocks closer to the cost of service. While I will use a standardized four-block rate structure in this case, I believe that the differentials among the customer classes are small enough that it might justify collapsing rate blocks in future cases (for example, combining the third and fourth blocks).

IV. Rate Design Under IAWC's Proposed Revenue Requirement

A. Introduction

Q. HAVE YOU APPLIED THESE PRINCIPLES TO DESIGN RATES THAT WOULD RECOVER IAWC'S PROPOSED REVENUE REQUIREMENT?

A. Yes, I have. I developed a five-step process that is consistent with the rate design principles discussed above. Following this process results in rates that are greatly simplified, move toward the establishment of single-tariff pricing, move toward the development of cost-based consumption charges, and are much fairer in their customer impact than IAWC's proposed rates. Briefly, the five steps are:

- Step 1: Put all districts on a common rate design
- Step 2: Move toward uniform meter charges
- Step 3: Move toward uniform consumption charges
- Step 4: Increase rates to customers who did not receive much increase in steps 1-3
- Step 5: Increase all rates proportionately, except those that have reached the limit of a reasonable increase through steps 1-4

Q. HYPOTHETICALLY, IF THE REVENUE INCREASE IS LOWER THAN THAT PROPOSED BY IAWC, CAN YOU JUST STOP AT STEP 2, 3, OR 4 OF YOUR FIVE-STEP PROCESS?

A. No, you cannot. These are steps in a process of meeting a revenue target. In this section of my testimony, that target is IAWC's proposed revenue requirement. If the revenue target were different, then some of these steps would be different. For example, when I describe Step 3, you will see that I use a 25% limit on the rate increase. The 25% limit was selected to be an amount that is slightly lower than the system average increase of

27.9%. If the system average increase were 10%, for example, then the limit on increases in Step 3 also would be at or below 10%. Later in my testimony, I will describe in detail the process that should be used to design rates for a revenue requirement that is lower than IAWC's proposal.

Q. DO YOU HAVE SCHEDULES THAT SHOW YOUR RECOMMENDED RATES TO RECOVER IAWC'S PROPOSED REVENUE REQUIREMENT?

A. Yes. Schedule SJR-4, which consists of 38 pages, shows a summary of the resulting rate increase for each customer class in each district (page 1), followed by a proof of revenues for each class in each district. The proof of revenues, of course, shows the billing determinants that I used, as well as the specific rates that I developed. It also shows the same information under IAWC's existing rates.

B. Step 1: Common Rate Design

Q. PLEASE TAKE US THROUGH THE SPECIFIC PROCESS YOU USED TO DEVELOP RATES, BEGINNING WITH YOUR STEP 1: PUT ALL DISTRICTS ON A COMMON RATE DESIGN.

A. My first step is to put all districts on a common rate design. I used the existing Southern Division rate structure as the model, not because I think it is ideal, but because it is the predominant rate structure (more customers are served under this rate than any other) on IAWC's system. I would emphasize that I used the structure of the rates as a model, not the specific rates themselves. Specifically, I use the Southern Division consumption blocks: first 30 ccf per month, next 570 ccf, next 12,400 ccf, and all over 13,000 ccf per month. I also use the existing customer charge ratios to standardize the relationship between the 5/8-inch customer charge and the customer charges for larger meter sizes.

1 Q. BEFORE YOU GO ANY FURTHER, HOW DID YOU DEVELOP THE BILLING DETERMINANTS FOR
2 DISTRICTS THAT WERE NOT ALREADY ON THE SOUTHERN DIVISION CONSUMPTION BLOCKS?

3 A. I used the bill frequency analysis (BFA) provided by IAWC in discovery. The BFA
4 contains information on the number of bills that were issued at each consumption level
5 (0 ccf, 1 ccf, 2 ccf, and so on) by meter size, customer class, and district. The BFA
6 provided by IAWC contained information for the 12 months ending August 31, 2002, so
7 it does not precisely match the test year. Also, because of the recent acquisition of
8 Chicago Metro, the BFA for that district included only 8 months of information (January
9 through August 2002). Therefore, I used the BFA to determine the percentage of
10 consumption that was in each rate block (by customer class by district), and I applied that
11 percentage to IAWC's future test year consumption for each customer class in each
12 district.¹

13 Q. PLEASE CONTINUE WITH YOUR DESCRIPTION OF STEP 1.

14 A. The final portion of Step 1 is to try to adopt a standardized set of ratios among the
15 consumption blocks, as I discussed earlier – without changing the rate in block 1 in each
16 district. Unfortunately, the existing rates in several districts are so far out of line with the
17 cost-based ratios I developed on Schedule SJR-3, that using the cost-based ratios would
18 result in some customer classes seeing their rates more than double, just as a result of

¹ There are a few instances where the results of these calculations appear illogical. For example, for the Champaign residential class, increasing the size of block 1 from 25 to 30 ccf looks like it results in a decrease in the amount of consumption in the block, when comparing IAWC's figures to mine. (Sch. SJR-4, p. 2 shows IAWC's block 1 consumption to be 3,558,269 ccf, while my block 1 consumption is 3,506,753.) This is caused by IAWC's filing being inconsistent with the BFA in a few instances. Specifically, from the BFA, 82.9% of Champaign residential consumption was in Champaign's existing block 1 (first 25 ccf); this increases to 85.1% of consumption when the block is changed to the first 30 ccf. However, IAWC's billing determinants for the future test year have 86.3% of residential consumption in the existing block 1. Because I cannot verify how IAWC developed its future test year billing determinants, I used the information from the BFA provided by IAWC and applied a consistent methodology to all districts and customer classes.

properly aligning the consumption charges. So, I used some ratios that would provide much steeper discounts than would be justified by cost and demand relationships; specifically, I set the block 2 rate at 80% of the block 1 charge, the block 3 rate at 70% of block 1, and the block 4 rate at 60% of block 1. In the few instances where applying these ratios would result in a rate reduction, I retained the existing rate.

Q. DID THIS STEP CREATE ANY CONCERNS ABOUT THE MAGNITUDE OF RATE INCREASES?

A. Yes, it did. Even with providing steeper discounts in the consumption blocks than justified by the cost of service study, the Pekin district still would have excessive increases for industrial and OPA customers. Specifically, using block ratios of 80/70/60 would result in Pekin industrial customers seeing a 95% increase and Pekin OPA customers seeing a 48% increase. These increases exceed the band of +/- 50% of the average increase that is my goal. (Under IAWC's proposed revenue requirement, the major customer classes – residential, commercial, industrial, OPA, and OWU – would have a system average increase of 27.9%, resulting in a +/- 50% range of 14% to 42%.) Pekin's current rates provide such large discounts, which are not reflective of cost of service differentials, that it is necessary to use excessively steep discounts that are not cost justified to keep increases for industrial and OPA customers at reasonable levels. Therefore, I set the ratios among the consumption block rates in Pekin such that the block 2 rate is 60% of block 1; block 3 is 50% of block 1; and block 4 is 40% of block 1.

Applying these ratios in Pekin results in a 39% increase for industrial customers and a 23% increase for OPA customers, which are within my range of 14% to 42%. In order to keep Pekin's industrial rates within that range, Pekin's consumption charges will be exempted from any further changes in steps 2 through 5.

1 Q. HOW MUCH ADDITIONAL REVENUE IS RAISED AS A RESULT OF STEP 1?

2 A. Step 1, which includes putting all districts on the same consumption blocks, common
3 customer charge ratios, and common consumption block ratios (except for Pekin) results
4 in additional revenue of \$3.95 million, which is 3.3% higher than IAWC's existing rates.

5 **C. Step 2: Move Toward Uniform Meter Charges**

6 Q. PLEASE DESCRIBE YOUR SECOND STEP IN DESIGNING RATES.

7 A. The second step is to begin to standardize IAWC's meter (or customer) charges. Under
8 existing rates, the customer charges for a 5/8-inch meter range from \$5.49 in Lincoln to
9 \$11.52 in Southern and Peoria. These different charges appear to be an artifact of
10 acquisitions that have occurred over time, rather than a true reflection of differences in
11 the cost of providing a meter, service line, and bill to the customer. My second step,
12 therefore, is to begin the process of moving toward a uniform set of customer charges
13 throughout IAWC.

14 Q. IS IT REASONABLE TO TRY TO ACHIEVE A UNIFORM SET OF CUSTOMER CHARGES IN THIS
15 CASE?

16 A. No, it is not. The differential in the existing charges coupled with the differences in the
17 meter ratios would make it infeasible to adopt a uniform set of customer charges in this
18 case. Some customers would see dramatic increases, while others would see no change at
19 all.

20 Q. WHAT DO YOU PROPOSE?

21 A. I propose to begin by putting all districts on one of two sets of customer charges. In later
22 steps, it might be necessary to deviate from this (for example, by increasing one district's

customer charges but not another's), but I think it is a reasonable step to try to consolidate the customer charges. Thus, in this step, I increase the 5/8-inch customer charge to \$9.00 per month for all districts where the existing charge is less than that amount. For all districts where the customer charge is \$9.00 per month or higher, I increase it to \$11.52 per month, which is the current charge in Southern.

Q. WHAT IS THE COMBINED REVENUE IMPACT OF YOUR STEPS 1 AND 2?

A. The combined effect of Steps 1 and 2 is to increase revenue by \$7.19 million, or 6.0% above existing rates.

D. Steps 3: Move Toward Uniform Consumption Charges

Q. PLEASE DESCRIBE STEP 3: MOVE TOWARD UNIFORM CONSUMPTION CHARGES.

A. This is similar to Step 2, except this step involves beginning the process of moving toward a common set of consumption charges. The existing consumption charges are just as diverse as the existing customer charges, so it will not be feasible to achieve a uniform set of consumption charges in this case. For example, the existing block 1 charges range from \$1.3670 per ccf in Pekin to \$2.4500 per ccf in Pontiac, with the Southern Division charge at \$2.1870 per ccf.

I would begin the process of consolidation by increasing the block 1 charge to the current charge for Southern (\$2.1870), but limiting the increase to a 25% increase. If a district's existing block 1 charge is higher than Southern's, then I retain the existing rate.

The other consumption block charges are then established by applying the standard block ratios that I discussed earlier.

1 Q. ARE THERE ANY DISTRICTS THAT ARE EXEMPTED FROM THIS STEP?

2 A. Yes, as I mentioned previously, because of the magnitude of the increase in Pekin from
3 adopting a more reasonable relationship among the consumption blocks, Pekin
4 consumption charges are exempt from any further increase. Therefore, this step does not
5 apply to Pekin's rates.

6 In addition, applying this step to Champaign would result in three classes
7 receiving increases outside my range of 14% to 42%: industrial (49%), OPA (58%), and
8 OWU (54%). To address this concern, I changed the ratios among the consumption
9 blocks for Champaign. Instead of the standard 80/70/60 relationship, I will use a much
10 steeper (and again, not strictly cost-justified) relationship of 70/55/50 (that is, the block 2
11 rate is 70% of block 1; block 3 is 55% of block 1, etc.). This moderates the increases to
12 the large users in Champaign to between 28% (industrial) and 34% (OPA).

13 Q. WHAT IS THE EFFECT OF THESE FIRST THREE STEPS ON REVENUES?

14 A. The combined effect of the first three steps is to increase revenues by \$11.88 million, or
15 11.0% above existing revenues.

E. Step 4: Increase Rates to Customers Who Have Not Received Much Increase from Steps 1-3

Q. GIVEN THE NEED, IN THIS PART OF YOUR TESTIMONY, TO MEET IAWC'S PROPOSED REVENUE REQUIREMENT – A 27.9% RATE INCREASE FOR RESIDENTIAL, COMMERCIAL, INDUSTRIAL, OPA, AND OWU CUSTOMERS – HOW DO YOU PROPOSE TO CONTINUE?

A. Step 4 of my rate design process involves increasing rates for customers who have not received a significant increase as a result of Steps 1-3. Specifically, it involves increasing the following rates by the amounts shown in parentheses:

- Lincoln consumption charges (15%)
- Peoria customer charges (30%)
- Pontiac consumption charges (20%)
- Southern customer charges (30%)
- Pekin customer charges (10%)

Q. WHAT IS THE RESULT OF INCORPORATING THESE INCREASES INTO YOUR RATE DESIGN?

A. The result of including these increases is that all customer classes in all districts would have rate increases ranging between 11% and 40%. The combined effect of Steps 1-4 is to raise an additional \$19.01 million in revenue, which is 17.7% above IAWC's existing rates.

F. Step 5: Increase All Rates Proportionately to Meet Revenue Requirement

Q. WHAT IS YOUR FINAL STEP?

A. The final step is to increase all rates proportionately to meet IAWC's proposed revenue requirement. The only exceptions to this are in those districts that would exceed the

1 upper end of the range of reasonable increases (42%) that I discussed earlier. In order to
2 keep the increases for all classes in all districts at or below 42%, I have exempted the
3 consumption rates in Pekin and Champaign from any further increase in this step.

4 Q. HOW MUCH OF A FURTHER INCREASE IS REQUIRED IN ORDER TO MEET THE COMPANY'S
5 PROPOSED REVENUE REQUIREMENT?

6 A. In order to meet IAWC's proposed revenue requirement from the five main classes of
7 customers, and given the exemption of Pekin and Champaign consumption rates, it would
8 require an 11.59% increase in all rates. This results in all customers classes in all districts
9 receiving rate increases in the range of 18.2% to 41.0%, so all classes are within the
10 range of 14% to 42% (representing +/- 50% of the system average increase of 27.9%).
11 Those two extremes are in Pekin – residential (18.2%) and industrial (41.0%). Other than
12 in Pekin, all class increases range between 19.9% (Lincoln industrial) and 34.9%
13 (Champaign OPA), which is a very tight range of +/- 29% of the system average increase.
14 The specific figures for each class and district are shown on page 1 of Schedule SJR-4.

15 Q. OVERALL, HOW IS THE REVENUE INCREASE DISTRIBUTED AMONG THE CUSTOMER CLASSES?

16 A. At the bottom of page 1 on Schedule SJR-4, I show the distribution of the increases by
17 customer class for all districts combined. The range is very close, with residential
18 customers receiving a 27.2% average increase and industrial customers a 31.5% average
19 increase, with the other customer classes falling in between those two.

20 Q. HOW DOES THIS DISTRIBUTION COMPARE TO IAWC'S PROPOSED RATE DESIGN?

21 A. Under IAWC's proposed rate design, the class average increases range from 20.8%
22 (industrial) to 29.8% (residential). In fact, under IAWC's proposal, all customer classes

1 except the residential class would receive an increase that is lower than system average,
2 while the residential class would receive an increase that is above the system average.
3 The effect of IAWC's proposal would be to perpetuate the below-cost rates for large
4 water users and require residential customers to make up the difference by paying higher
5 rates than are justified. My proposed rate design begins to eliminate this subsidy and
6 distributes IAWC's proposed revenue requirement more equitably among the customer
7 classes.

8 **V. Bill Impact Analysis**

9 Q. HAVE YOU PERFORMED AN ANALYSIS TO INDICATE THE EFFECT THAT YOUR PROPOSAL AND
10 IAWC'S PROPOSAL WOULD HAVE ON INDIVIDUAL CUSTOMERS' BILLS?

11 A. Yes, I have. I have taken the data from the bill frequency analysis for approximately 2.5
12 million actual bills and calculated the bill under IAWC's present rates, IAWC's proposed
13 rates, and my proposed rates under IAWC's proposed revenue requirement. The only
14 bills in the BFA that are excluded from this analysis are those where IAWC's BFA did
15 not indicate the meter size of the customer. This was the case for approximately 5,700
16 bills out of the total of approximately 2,511,000 bills in the BFA, or approximately 0.2%
17 of all bills.

18 Q. WHAT DOES YOUR ANALYSIS INDICATE?

19 A. My analysis is summarized on Schedule SJR-5. This schedule shows that over 99% of
20 all customers' bills would increase by between 10% and 50% under my proposal. In
21 contrast, under IAWC's proposal, only 80% of customers' bills would have increases
22 within this range. Specifically, IAWC has proposed that 6% of its customers' bills would

1 increase by less than 10%, while 14% of bills (more than 345,000 bills) would increase
2 by more than 50%. In essence, not only does my proposal make substantial progress
3 toward moving IAWC to single tariff pricing, it does so in a way that avoids the
4 extraordinarily high rate increases proposed by IAWC for thousands of customers.

5 Q. WHAT DO YOU CONCLUDE ABOUT THE MERITS OF YOUR RATE DESIGN PROPOSAL COMPARED
6 TO IAWC'S RATE DESIGN PROPOSAL?

7 A. I conclude that my proposal has several benefits when compared to IAWC's proposal.
8 First, my proposal makes substantial progress toward consolidating IAWC's rates. I put
9 all customers on a common set of consumption blocks and I establish meter charges
10 based on a common set of meter ratios. This constitutes a significant step toward moving
11 IAWC to single-tariff pricing and is a major step toward simplifying IAWC's tariffs and
12 making them more understandable.

13 Second, I begin the process of bringing IAWC's consumption charges closer to
14 reflecting the cost of service. This will send appropriate price signals to IAWC's larger
15 water users. It also will begin to eliminate some of the subsidies that have been flowing
16 from IAWC's smaller customers to its larger customers. It also should have the
17 additional benefit of improving the fairness of IAWC's rates; for example, between
18 similar commercial or industrial customers in different IAWC districts who may be
19 competing with each other.

20 Third, I accomplish these important benefits without having an unacceptably
21 disparate impact on customer classes or individual customer bills. I avoid the extremely
22 large (more than 50%) increases that IAWC would impose on more than 345,000 bills
23 (14% of all bills) in Chicago Metro, Streator, and Sterling. In contrast, under my

proposal only about 11,000 bills (less than one-half of one percent) would receive increases of more than 50%, and nearly all of those are bills that have very low consumption (it is unlikely that many customers would have very low consumption every month; it typically reflects seasonal businesses or residential customers who might be away for a substantial portion of a month but return to more average usage the rest of the year).

I conclude, therefore, that my proposal is vastly preferable to the Company's. I have designed rates to collect IAWC's proposed revenue requirement, but I have done so in a way that avoids very large rate increases and that makes substantial progress toward consolidating and simplifying IAWC's rates. My proposal also begins to align IAWC's consumption and customer charges with the cost of providing service, which should be beneficial to the Company and all customers in the future.

VI. Rates to Collect a Lower Revenue Requirement

Q. CAN YOU APPLY YOUR RATE DESIGN PRINCIPLES TO DEVELOP RATES TO COLLECT A LOWER REVENUE REQUIREMENT THAN THE AMOUNT REQUESTED BY IAWC?

A. Yes, I can. I have applied my rate design principles to a hypothetical \$15 million revenue requirement increase for IAWC. Of this amount, \$13.55 million would be collected from the major classes: residential, commercial, industrial, OPA, and OWU. I started with the rates I designed under IAWC's proposed revenue requirement and followed five steps to design rates to collect the lower revenue requirement. The specific steps are:

- First, I decrease the 5/8-inch customer charge and all consumption blocks in each district in proportion to the change in the amount of the rate increase.

- 1 • Second, I equalize the 5/8-inch customer charge in districts where the
2 charges are reasonably close (roughly within 50 cents). This results in
3 five different customer charges instead of the eight different charges under
4 current rates.
- 5 • Third, I set the other customer charges by applying the standard (Southern
6 Division) meter ratios. The only exceptions are for the 3/4-inch and
7 1-inch charges in Lincoln, where the existing charges are significantly
8 higher than they would be if the standard ratios were used. Therefore, for
9 the 3/4-inch and 1-inch charges in Lincoln, I retained the existing rate.
- 10 • Fourth, I identify any customer classes in districts that would have
11 increases outside of the range of +/- 50% of the system average increase.
12 With a hypothetical \$15 million increase, the system average increase is
13 12.6%, so the acceptable range of class increases is from 6.3% to 18.9%.
14 This step found that all customer classes had increases within the
15 acceptable range, except for the Champaign industrial, OPA, and OWU
16 classes. To address this concern, I further lowered the consumption
17 charges in blocks 3 and 4 of Champaign's rates. These adjustments also
18 serve to match the revenue produced under my rates to the target revenue
19 requirement.
- 20 • Finally, I perform a bill impact analysis to identify whether further
21 adjustments are necessary to address extreme impacts on customers' bills.
22 In this instance, as I describe below, no such adjustments are necessary.

23 The results of this process are shown in Schedule SJR-6. This schedule follows the same
24 format as Schedule SJR-4, with a summary on the first page, followed by 37 pages with a
25 detailed proof of revenues.

26 Q. PLEASE DESCRIBE THE RESULTS OF YOUR RATE DESIGN UNDER THE HYPOTHETICAL LOWER
27 REVENUE REQUIREMENT.

28 A. Applying my rate design to a \$15 million (12.6%) rate increase has all customer classes
29 in all districts receiving rate increases within the range of +/- 50% of the system average
30 increase. Specifically, the increases range from 7.3% (Lincoln industrial) to 18.3%
31 (Pekin industrial). On a system basis, the average residential increase is 12.1%, the
32 average industrial increase is 14.6%, and other class increases fall between those two.

1 My rate design has the additional benefit of moving toward single-tariff pricing. I
2 standardize the customer charge ratios (except in Lincoln where I do not decrease the
3 existing 3/4-inch or 1-inch charges), put all districts on the same rate blocks, and begin
4 the process of moving toward the same customer charges (collapsing the current eight
5 different customer charges to five). In addition, my rate design proposal moves IAWC's
6 consumption rates closer to cost-based rates that more accurately reflect differences in
7 class demand characteristics.

8 Q. DID YOU ALSO PERFORM A CUSTOMER IMPACT ANALYSIS FOR THIS RATE DESIGN PROPOSAL?

9 A. Yes, I did. The results of the customer impact analysis are shown on Schedule SJR-7.
10 This was performed in the same way as the analysis I presented in Schedule SJR-5. The
11 impact analysis shows that 93% of customers would receive increases of less than 20%,
12 with essentially all (99.7%) customers receiving increases of less than 30%.

13 Q. YOUR IMPACT ANALYSIS ON SCHEDULE SJR-7 SHOWS A FEW BILLS WOULD DECREASE
14 COMPARED TO CURRENT RATES. WHY IS THAT THE CASE?

15 A. Fewer than 1,600 bills (0.1%) would decrease under my rates compared to existing rates.
16 All of these bills are for customers who would benefit from the change in rate blocks.
17 Most of them are Chicago Metro residential customers with water consumption in excess
18 of 50 ccf per month. While commercial customers in Chicago Metro have declining
19 block rates, residential customers do not. I do not understand why the rates were set in
20 this fashion because there are a number of customers in the residential class with larger
21 meters and significant consumption (I expect that most of these are apartment buildings
22 or other multi-family residential buildings; or they may be misclassified). By putting
23 residential and commercial customers on the same consumption blocks, high-use

1 residential customers will pay the same rates as commercial customers with the same
2 usage and meter size. This results in rate reductions for some on some of these
3 residential bills.

4 Similar results occur in Champaign and Streator for customers whose
5 consumption would shift from a higher-cost block to a lower-cost block (roughly
6 customers with consumption in the range of 800-1600 ccf per month).

7 Q. YOUR IMPACT ANALYSIS ALSO SHOWS SEVEN BILLS THAT WOULD MORE THAN DOUBLE.
8 WHY IS THAT THE CASE?

9 A. The seven bills that would increase by more than 100% are all in Lincoln. All seven bills
10 are for a 6-inch meter and no consumption. The increase in the bill is solely a result of
11 putting Lincoln's customer charges on standard meter-capacity ratios.

12 Q. DO EITHER THE FEW HIGH BILLS OR DECREASED BILLS LEAD YOU TO CHANGE YOUR RATES?

13 A. No, they do not. The high bills are for large meters and no consumption. This is not a
14 year-round occurrence; in the other months, I would expect the customer(s) receiving
15 these bills to have substantial consumption. Thus, on an annual basis, the increase to the
16 customer would be in line with other, similar customers.

17 The few decreases in bills are the result of standardizing the rate blocks. Most of
18 these decreases result from charging all Chicago Metro customers the same rates. This is
19 a question of fundamental fairness; it has residential and commercial customers with the
20 same meter size and same consumption paying the same rates. In order to eliminate the
21 rate reductions, it would be necessary to either (a) perpetuate the unfairness of the
22 existing rates, or (b) increase commercial rates in Chicago Metro by more than 50%

1 above the system average increase. I consider the consequences of both of those options
2 to be worse than my proposal.

3 Q. WHAT DO YOU RECOMMEND?

4 A. Based on a hypothetical revenue requirement increase of \$15 million, I recommend that
5 the Commission order IAWC to adopt rates that are no higher than the specific rates I
6 show on Schedule SJR-6. These rates would permit IAWC to recover an additional
7 \$13.55 million (or 12.6%) of revenue from its residential, commercial, industrial, OPA,
8 and OWU customers. The Commission should require IAWC to adopt a similar
9 percentage increase in its other charges (for example, fire protection, competitive rates,
10 and other special rates) to achieve the hypothetical total revenue requirement increase of
11 \$15 million.

12 Q. WHAT WOULD YOU RECOMMEND IF THE COMMISSION GRANTED A RATE INCREASE
13 DIFFERENT FROM THE ONES YOU CONSIDER IN YOUR TESTIMONY?

14 A. I recommend that the Commission follow the same process that I used to design rates to
15 meet a lower revenue requirement. The process begins with my rates under IAWC's
16 proposed revenue requirement. The 5/8-inch meter rates and all consumption rates are
17 then reduced by taking the Commission's proposed overall percentage increase and
18 dividing it by IAWC's proposed overall increase (27.9%). This ratio is then multiplied
19 by the increase in each rate that I proposed under IAWC's proposed revenue requirement.
20 The rates for other meter sizes are calculated by applying standard meter ratios, with the
21 possible exception of Lincoln 3/4-inch and 1-inch rates which may need to remain at
22 existing levels to avoid substantial bill reductions. These results should be adjusted to
23 (1) group together districts with similar meter charges; (2) ensure that no customer class

1 receives an increase that is more than 150% of the system average percentage increase or
2 less than 50% of the system average percentage increase; and (3) ensure that none of the
3 consumption charges are lower than the base cost of water. If necessary, the rates are
4 then adjusted further as necessary to achieve the overall revenue requirement. This
5 process should ensure that all rates remain within +/- 50% of the system average and that
6 the relationships among the meter charges and among consumption blocks that I
7 developed are retained. It also should retain the same relative bill impacts as my
8 proposal.

9 Q. DO YOU INTEND TO RESPOND TO THE PROPOSALS OF THE STAFF AND INTERVENORS?

10 A. Yes, I plan to review the revenue requirements, cost of service, and rate design proposals
11 of the Staff and intervenors. To the extent necessary, I will prepare rebuttal testimony
12 that applies my rate design principles to their proposals.

13 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

14 A. Yes, it does.

Appendix A

Scott J. Rubin

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Current Position

Public Utility Attorney and Consultant, Selinsgrove, PA. 1994 to present. I provide legal, consulting, and expert witness services to various organizations interested in the regulation of public utilities.

Previous Positions

Lecturer in Computer Science, Susquehanna University, Selinsgrove, PA. 1993 to 2000.

Senior Assistant Consumer Advocate, Office of Consumer Advocate, Harrisburg, PA. 1990 to 1994.

I supervised the administrative and technical staff and shared with one other senior attorney the supervision of a legal staff of 14 attorneys.

Assistant Consumer Advocate, Office of Consumer Advocate, Harrisburg, PA. 1983 to 1990.

Associate, Laws and Staruch, Harrisburg, PA. 1981 to 1983.

Law Clerk, U.S. Environmental Protection Agency, Washington, DC. 1980 to 1981.

Research Assistant, Rockville Consulting Group, Washington, DC. 1979.

Current Professional Activities

Member, American Bar Association, Public Utility Law Section.

Member, American Water Works Association.

Admitted to practice law before the Supreme Court of Pennsylvania, the New York State Court of Appeals, the United States District Court for the Middle District of Pennsylvania, the United States Court of Appeals for the Third Circuit, and the Supreme Court of the United States.

Previous Professional Activities

Member, American Water Works Association, Rates and Charges Subcommittee, 1998-2001.

Member, Federal Advisory Committee on Disinfectants and Disinfection By-Products in Drinking Water, U.S. Environmental Protection Agency, Washington, DC. 1992 to 1994.

Chair, Water Committee, National Association of State Utility Consumer Advocates, Washington, DC. 1990 to 1994; member of committee from 1988 to 1990.

Member, Board of Directors, Pennsylvania Energy Development Authority, Harrisburg, PA. 1990 to 1994.

Member, Small Water Systems Advisory Committee, Pennsylvania Department of Environmental Resources, Harrisburg, PA. 1990 to 1992.

Member, Ad Hoc Committee on Emissions Control and Acid Rain Compliance, National Association of State Utility Consumer Advocates, 1991.

Member, Nitrogen Oxides Subcommittee of the Acid Rain Advisory Committee, U.S. Environmental Protection Agency, Washington DC. 1991.

Education

J.D. with Honors, George Washington University, Washington, DC. 1981.

B.A. with Distinction in Political Science, Pennsylvania State University, University Park, PA. 1978.

Publications and Presentations

“Quality of Service Issues,” a speech to the Pennsylvania Public Utility Commission Consumer Conference, State College, PA. 1988.

K.L. Pape and S.J. Rubin, “Current Developments in Water Utility Law,” in *Pennsylvania Public Utility Law* (Pennsylvania Bar Institute). 1990.

Presentation on Water Utility Holding Companies to the Annual Meeting of the National Association of State Utility Consumer Advocates, Orlando, FL. 1990.

“How the OCA Approaches Quality of Service Issues,” a speech to the Pennsylvania Chapter of the National Association of Water Companies. 1991.

Presentation on the Safe Drinking Water Act to the Mid-Year Meeting of the National Association of State Utility Consumer Advocates, Seattle, WA. 1991.

“A Consumer Advocate's View of Federal Pre-emption in Electric Utility Cases,” a speech to the Pennsylvania Public Utility Commission Electricity Conference. 1991.

Workshop on Safe Drinking Water Act Compliance Issues at the Mid-Year Meeting of the National Association of State Utility Consumer Advocates, Washington, DC. 1992.

Formal Discussant, Regional Acid Rain Workshop, U.S. Environmental Protection Agency and National Regulatory Research Institute, Charlotte, NC. 1992.

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Member, Technical Horizons Panel, Annual Meeting of the National Association of Water Companies, Hilton Head, SC. 1992.

M.D. Klein and S.J. Rubin, “Water and Sewer -- Update on Clean Streams, Safe Drinking Water, Waste Disposal and Pennvest,” *Pennsylvania Public Utility Law Conference* (Pennsylvania Bar Institute). 1992.

Presentation on Small Water System Viability to the Technical Assistance Center for Small Water Companies, Pa. Department of Environmental Resources, Harrisburg, PA. 1993

“The Results Through a Public Service Commission Lens,” speaker and participant in panel discussion at Symposium: “Impact of EPA's Allowance Auction,” Washington, DC, sponsored by AER*X. 1993.

“The Hottest Legislative Issue of Today -- Reauthorization of the Safe Drinking Water Act,” speaker and participant in panel discussion at the Annual Conference of the American Water Works Association, San Antonio, TX. 1993.

“Water Service in the Year 2000,” a speech to the Conference: “Utilities and Public Policy III: The Challenges of Change,” sponsored by the Pennsylvania Public Utility Commission and the Pennsylvania State University, University Park, PA. 1993.

“Government Regulation of the Drinking Water Supply: Is it Properly Focused?,” speaker and participant in panel discussion at the National Consumers League's Forum on Drinking Water Safety and Quality, Washington, DC. 1993. Reprinted in *Rural Water*, Vol. 15 No. 1 (Spring 1994), pages 13-16.

“Telephone Penetration Rates for Renters in Pennsylvania,” a study prepared for the Pennsylvania Office of Consumer Advocate. 1993.

“Zealous Advocacy, Ethical Limitations and Considerations,” participant in panel discussion at “Continuing Legal Education in Ethics for Pennsylvania Lawyers,” sponsored by the Office of General Counsel, Commonwealth of Pennsylvania, State College, PA. 1993.

“Serving the Customer,” participant in panel discussion at the Annual Conference of the National Association of Water Companies, Williamsburg, VA. 1993.

“A Simple, Inexpensive, Quantitative Method to Assess the Viability of Small Water Systems,” a speech to the Water Supply Symposium, New York Section of the American Water Works Association, Syracuse, NY. 1993.

S.J. Rubin, “Are Water Rates Becoming Unaffordable?,” *Journal American Water Works Association*, Vol. 86, No. 2 (February 1994), pages 79-86.

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“Are Water Rates Becoming Unaffordable?,” a speech to the Legislative and Regulatory Conference, Association of Metropolitan Water Agencies, Washington, DC. 1994.

“Relationships: Drinking Water, Health, Risk and Affordability,” speaker and participant in panel discussion at the Annual Meeting of the Southeastern Association of Regulatory Commissioners, Charleston, SC. 1994.

“Small System Viability: Assessment Methods and Implementation Issues,” speaker and participant in panel discussion at the Annual Conference of the American Water Works Association, New York, NY. 1994.

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- S.J. Rubin, "Small System Monitoring: What Does It Mean?," *Impacts of Monitoring for Phase II/V Drinking Water Regulations on Rural and Small Communities* (National Rural Water Association 1994), pages 6-12.
- "Surviving the Safe Drinking Water Act," speaker at the Annual Meeting of the National Association of State Utility Consumer Advocates, Reno, NV. 1994.
- "Safe Drinking Water Act Compliance -- Ratemaking Implications," speaker at the National Conference of Regulatory Attorneys, Scottsdale, AZ. 1995. Reprinted in *Water*, Vol. 36, No. 2 (Summer 1995), pages 28-29.
- S.J. Rubin, "Water: Why Isn't it Free? The Case of Small Utilities in Pennsylvania," *Utilities, Consumers & Public Policy: Issues of Quality, Affordability, and Competition, Proceedings of the Fourth Utilities, Consumers and Public Policy Conference* (Pennsylvania State University 1995), pages 177-183.
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